

REMARKS

In paragraph 1 of the Action, claim 6 was objected to. In view of the objection, claim 6 has been amended.

In paragraphs 3 and 6 of the Action, claims 1, 2 and 4-7 were rejected under 35 U.S.C. 102(b) or 35 U.S.C. 103(a) by Li et al. In paragraph 7 of the Action, claim 3 was objected to as being dependent upon a rejected base claim, but was indicated allowable if rewritten in independent form.

In view of the rejection and indication of allowability, claims 1, 6 and 7 have been amended to clearly recite the invention, and new claims 8-10 have been filed. Claim 10 is a combination of claims 1-3, so that claim 10 is allowable over Li et al.

In Li et al., in an operation of a system as shown in Fig. 1A, a buffer is introduced into a buffer reservoir 24 and a channel 22 from a buffer vial 36 through a tubing 38. Then, pressurized air forces liquid sample from a sample vial 49 into a sample reservoir 26 through tubing 50. To perform electrophoretic separation, sample injection voltage is generated between the loading end 28 and the running end of the channel 30. To prevent leaching of the sample, a voltage higher than that at point 28 is generated at point 34.

In the embodiment of Fig. 2A, a sample outlet reservoir 134 is connected to a sample inlet reservoir 130, and other structure is substantially the same. As the sample inlet reservoir 130 is connected to the sample outlet reservoir 134, when the sample is loaded into the sample reservoir, air originally present would be removed via tubing 106. The other operation is the same.

In claim 1, the first opening and closing mechanism is disposed at the other end of the separating channel, and the second opening and closing mechanism is disposed at one end of the sample quantity control channel away from the separating channel.

The first opening and closing mechanism is opened when the migration buffer is introduced into the separating channel, and then closed. The second opening and closing mechanism is closed when the migration buffer is introduced into the separating channel, and opened when the sample injecting portion is immersed into a sample so that the sample is introduced into the separating channel for the volume of the sample quantity control channel while the migration buffer in the separating channel enters the sample quantity control channel by capillary phenomenon.

In the invention, when the sample is introduced into the separating channel, the sample injecting portion is immersed into a sample so that the sample is introduced into the separating channel for the volume of the sample quantity control channel while the migration buffer in the separating channel enters the sample quantity control channel by capillary phenomenon. In Li et al., there is no sample quantity control channel of the invention, because the sample is not introduced into the channel 22 by capillary phenomenon, i.e. entering the migration buffer in the separating channel into the sample quantity control channel. Also, the valves and the operation thereof used in claim 1 are different from that disclosed in Li et al. Thus, claim 1 is not disclosed or suggested by Li et al.

In the method of claim 6, a migration buffer is filled in a separating channel while a sample quantity control channel branching from the separating channel is empty without filling the migration buffer, and the sample is introduced into the separating channel from a sample injecting portion of the separating channel for an amount corresponding to a volume of the sample quantity control channel while the migration buffer in the separating channel is introduced into the sample quantity control channel by capillary phenomenon.

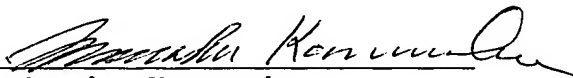
In Li et al., the sample is forcibly supplied into the sample reservoir 26 by air into the channel 22. There is no sample quantity control channel, nor using capillary phenomenon to introduce the sample into the separating channel. Thus, the features of claim 6 are not disclosed or suggested in Li et al.

As explained above, the features of the invention as recited in the claims are patentable over Li et al.

Reconsideration and allowance are earnestly solicited.

Respectfully Submitted,

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